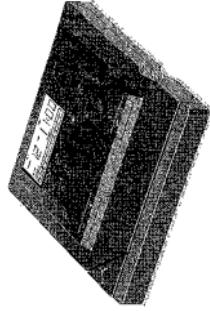


Service  
Service  
Service



# Service Manual

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## CLASS 1 LASER PRODUCT

Producten tillverkas i en akustiskt  
stötssäker produktionsmiljö i Japan  
vara upptagen under klassificering  
varför upptagen en klassificering.

⑤ Varning!  
Ösning laserstrålning när denna del är öppnad och  
spelaren är urkopplad. Bevara ej strålen.

⑥ Advarsel!  
Urspringlig laserstråling ved åbning når sikkerhedsanordningene  
er ude af funktion. Undgå udsejteelse for stråling.

⑦ Varoitus!  
Laita seuraaviksi laserdiodiin, joka lähetää näkymätönä  
silmille varauslistaa laasersäteilijä.



PHILIPS

## SPECIFICATION

GENERAL:	
Acco-package	SBC 64x09
Type	4 V/nom.
Output voltage	1,75 hours
Lifetime	
CD-PART:	
Frequency response	: 20 - 20.000 Hz within 1dB
Output level	: 1,2 Vrms within 2dB
S/N ratio	: 80 dB min.
THD	: 0,3 % max. at 1 kHz
Channel difference	: 2 dB max.
Channel crosstalk	: -60 dB max. at 1 kHz
Deemphasis	: 0 or 15/50 µs switched automatic by subcode on the disc
DAC	: 1 bit "BITS STREAM"

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**(B) WARNING**  
All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools at this potential.



### WAARSCHUWING

Alle IC's en vele andere halffabrikaten zijn gevoelig voor elektrostatische ontlaadingen (ESD).

Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met wegeestand verbonden bent met het gezette potentiële als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op ditzelfde potentiële.

### ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).

Leur longévité pourrait être considérablement réduite par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enlever le bracelet sera une résistance de sécurité.

Veuillez à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

### WARNING

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).

Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Sorgen Sie dafür, daß das im Reparaturfall über ein Pulsarmband mit Wegestand mit dem Massopotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potentia.

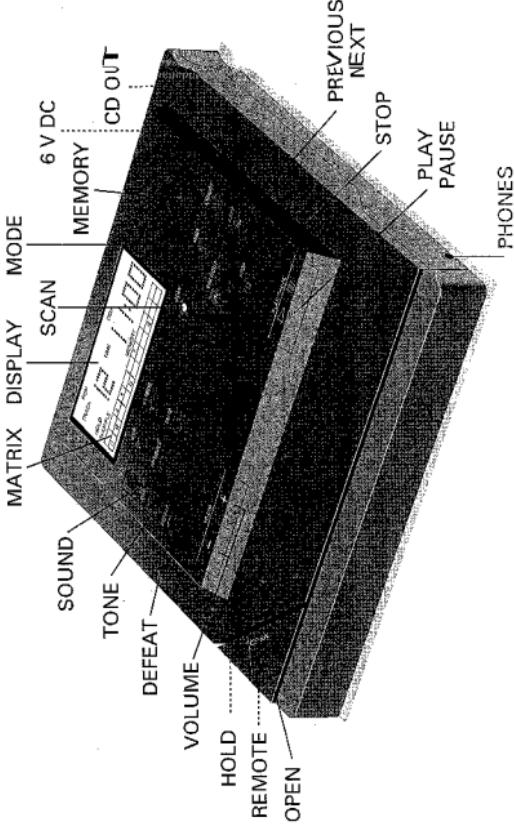
### AVVERTIMENTO

Tutti i IC e paracchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cautela alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa del dispositivo elettrico tramite un braccialetto a resistenza.

Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

## SHUT OFF FUNCTIONS, CONNECTIONS



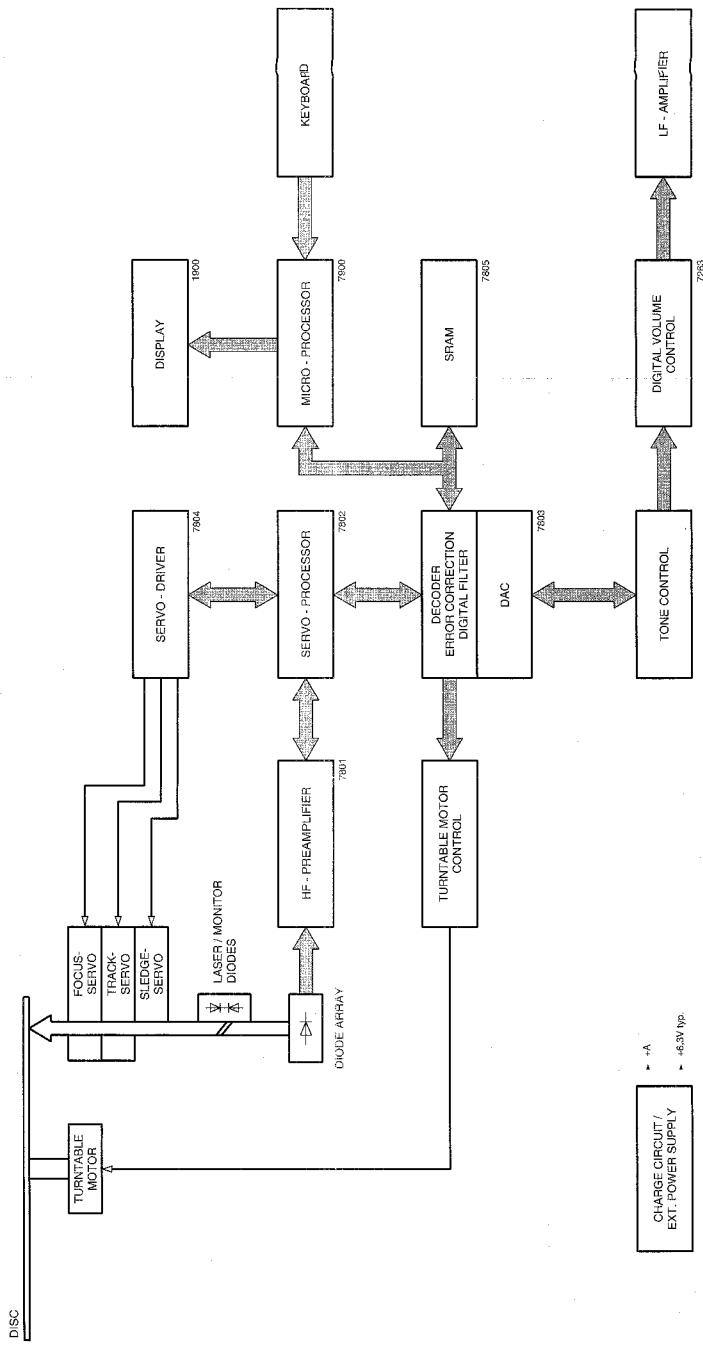
OPERATION	CONDITION	ACTION
CLOSE DOOR	POWER OFF	Power on - Start up - Read TOC - STOP - Update display/information [matrix, max. Tracks on desc, length of CD]
OPEN DOOR	POWER ON/OFF	Power off - Clear display - Clear TOC - Clear program memory - Clear nodes
Switch HOLD ON	POWER ON	All keys are ignored, flag hold is shown on the display. The set works normally with the wired- or the IR-remote control.
SHUT OFF	STOP	The set shuts off after approx. 3ds after the last physical action. All parameters (program, volume, soundfeatures) are memorized.
BATTERY WEAK	POWER ON	Battery empty indication is flashing
	POWER OFF	The set doesn't start up if PLAY is pressed. Flag battery empty is shown for 500ms.
BATTERY EMPTY	POWER ON	The set is switched off

CONNECTION	DESCRIPTION
6 V DC	Socket for the mains adaptor / battery charger SBC 6608
PHONES	Headphone output
CD-OUT	Linear output for HiFi-systems
REMOTE	Socket for the optional IR-remote control set SBC 6209 or the wired remote control SBC 6203

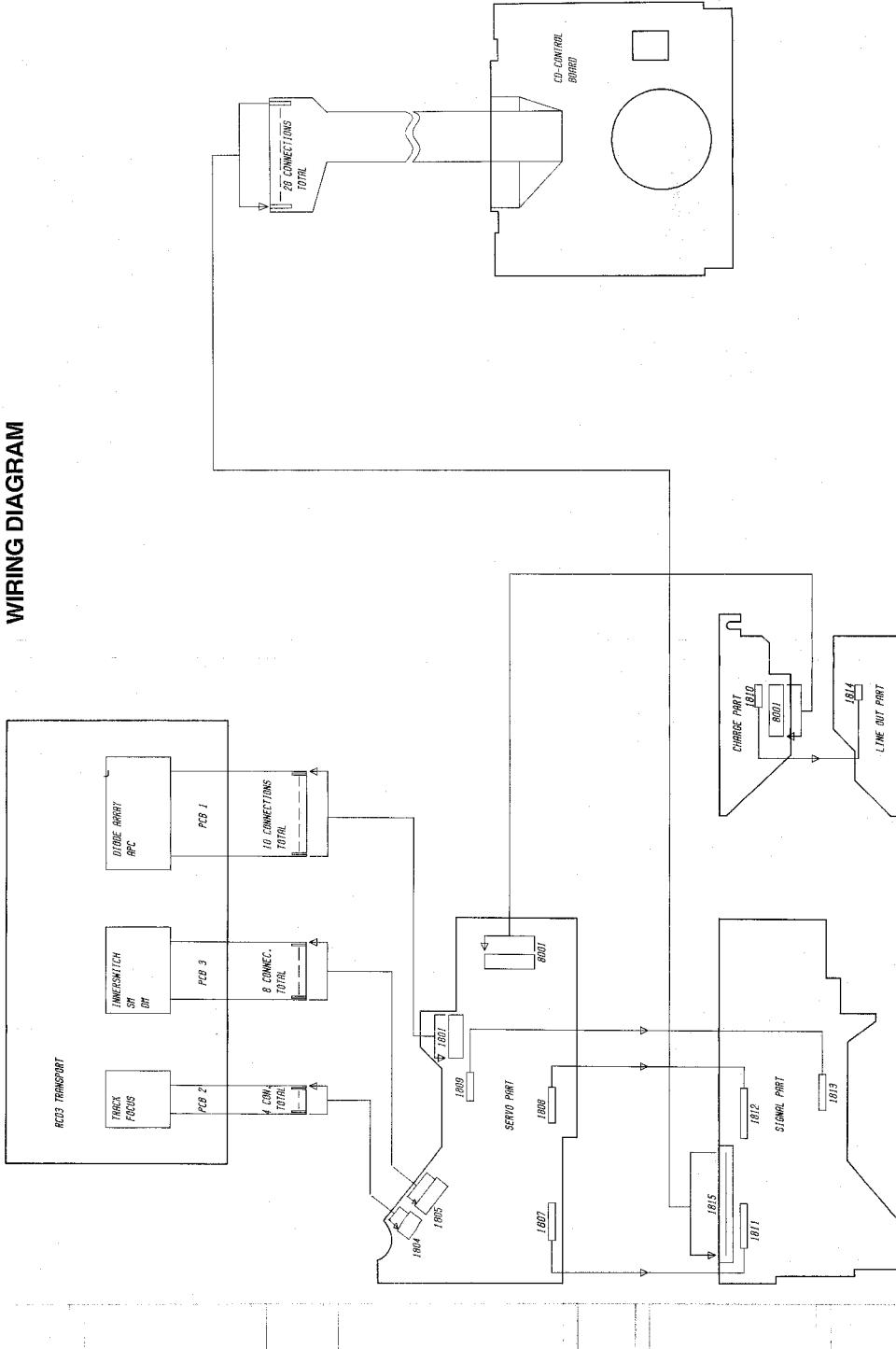
## CONTROLS

KEY	CONDITION	ACTION
PLAY	POWER ON/OFF	Starts playing the 1st track, preselected track or 1st programmed track. The available tracks are shown on the matrix, the actual track is flashing.
PLAY		Toggles between PLAY and PAUSE.
STOP/TRACK STORED		The programmed tracknumbers are shown on the matrix. After starting up by pressing PLAY the actual tracknumber is flashing. An already played tracknumber will be cleared from the display.
SCAN		Leaves the SCAN-mode and continues normal play.
STOP/SHUFFLE		All existing (or programmed) tracknumbers are shown on the matrix. The set starts playing the first random track. An already played tracknumber will be cleared from the matrix.
PLAY		The set goes into STOP-mode, the display shows the TOC-information.
STOP		Cleans the program-memory. "C" is shown on the display for 500ms.
STOP		Tracknumber for playback can be selected. The selected track is flashing, all lower tracknumbers than the selected one are cleared from the matrix.
PLAY		Skips forward to the next track.
PLAY/MEMORY		Skips forward to the next stored track.
PLAY/SHUFFLE		Skips forward to the next random-track. After reaching the last random-title a new sequence will be generated, the "shuffle-snake" is shown on the track-indication and all tracknumbers are flashing.
PROGRAMMING		Skips forward to the next program-track.
KEY DEPRESSED FOR MORE THAN 1s.		Fast forward till the key is released, high speed after 6s (except SCAN-mode).
STOP		Similar as NEXT, but opposite direction.
PLAY		Skips backward to the previous track.
PLAY/MEMORY		Skips backward to the previous stored track.
PLAY/SHUFFLE		Skips backward to the previous random-track. After reaching the first shuffled title a new shuffle sequence will be started.
PROGRAMMING		Skips forward to the previous program-track.
KEY DEPRESSED FOR MORE THAN 1s.		Fast backward till the key is released, high speed after 6s (except SCAN-mode).
PLAY/STOP		Scan starts from the first or selected track. The first 10s of the available track numbers will be audible.
PROGRAM		PROGRAM-mode is activated. Tracks can be selected using NEXT/PREV. Pressing PROGRAM again will store the selected tracknumber - "P" is shown on the display. A maximum of 32 tracks can be stored. If the memory has been filled up "FULL" is shown on the display. To leave the PROGRAM-mode release the keys for approx. 3s.
REVIEW		REVIEW is activated if the PROGRAM button is depressed for more than 1s. The programmed titles will be shown on the matrix.
MODE	PLAY/STOP	Scrolls the functions REPEAT 1 - REPEAT ALL - SHUFFLE - REPEAT.
VOL +	PLAY/STOP	The selected operation takes place when the current title has been changed.
VOL -	PLAY/STOP	Volume up (16 steps).
JAZZ, POP, CLASSIC	PLAY/STOP	Soundfeatures
AMB, DBS, MUTE	PLAY/STOP	This soundfeatures can be added individually.
DEF	PLAY/STOP	Clears all soundfeatures.

# BLOCKDIAGRAM



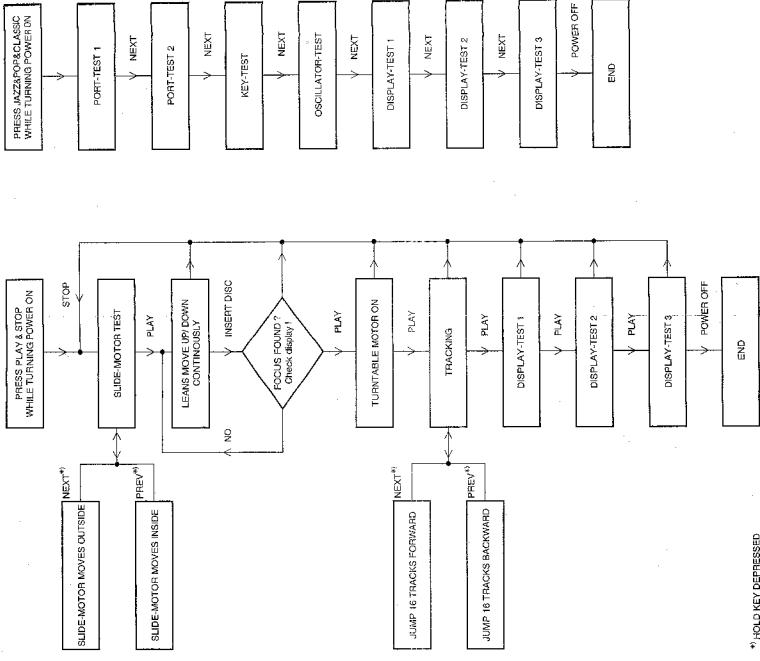
## WIRING DIAGRAM



SERVICE TEST PROGRAM

SERVICE TEST PROGRAM

FACTORY TEST PROGRAM



**5. SERVICE STEP 4 - TRACKING**  
Display is as shown in Fig. 5. All tracks, track and side control circuits are activated, music is audible. This mode is equal to normal play mode without sound effects and special function (sear, shuffle,...) to trigger 12-tracks counter/backward procedure.

**6. SERVICE STEP 5 - DISPLAY TEST 1**  
Display is as shown in Fig. 6. All vertical segments, all sound feature flags and the hold flag are activated.  
To get into service step 6 press the PLAY button, to return to service step 1 press STOP.

**7. SERVICE STEP 6 - DISPLAY TEST 2**  
Display is as shown in Fig. 7. All horizontal segments and a inside flag are activated.  
To get into service step 6 press the PLAY button, to return to service step 1 press STOP.

**8. SERVICE STEP 7 - DISPLAY TEST 3**  
Display is as shown in Fig. 8. All existing segments are active.  
To leave the service test program disconnect the set from the power supply, to return to service step 1 press STOP.

**4. FACTORY TEST PROGRAM**

**1. PRELIMINARY SETUP**  
To get into the service test program hold the keys PLAY & STOP depressed while turning POWER ON. The display is as shown in Fig. 1. IMPORTANT NOTES: The door switch is ignored in software and the door can be opened during the test procedure. This might be useful, when checking no movement of the lens.  
ATTENTION: The laser beam is also kept emitting - care of safety requirements!

**2. SERVICE STEP 1 - SLIDE MOVEMENT**  
To get into the service test program hold the keys NEXT & PREV depressed while turning POWER ON. The display is as shown in Fig. 2. At the time and after endpoints reaching will be audible. Stop pressing them at the points.  
To get into service step 2 press the PLAY button.

**3. SERVICE STEP 2 - LENS MOVEMENT & FOCUS SEARCH**  
Display is as shown in Fig. 2. To check movement of the lens open door and remove the disc. The lens should move slowly in clockwise direction. If the control circuit is activated, Signal 11 can be measured on pin 29 of the service processor (7802). To check the focus search procedure repeat test 3 and, if a focus has been found the display is as shown in Fig. 3.  
To get into service step 3 press the PLAY button, to return to service step 1 press STOP.

**4. SERVICE STEP 3 - TURNABLE MOTOR**  
Display is as shown in Fig. 4. The turntable motor will start rotating, the lens control circuit is activated.  
To get into service step 4 press the PLAY button, to return to service step 1 press STOP.

**5. FACTORY STEP 4 - OSCILLATOR TEST**  
This test mode shows the quantum frequency (approx. 380-3272 kHz) and the amplitude of the oscillation. The display is as shown in Fig. 5. All horizontal segments and a inside flag are activated.  
To get into factory step 4 press the NEXT button.

**6. FACTORY STEP 5 - DISPLAY TEST 1**  
Display is as shown in Fig. 6. All vertical segments, all sound feature flags and the hold flag are activated.  
To get into factory step 5 press the NEXT button.

**7. FACTORY STEP 6 - DISPLAY TEST 3**  
Display is as shown in Fig. 8. All existing segments are active.  
To leave the factory test program disconnect the set from the power supply.



## ADJUSTMENT TABLE

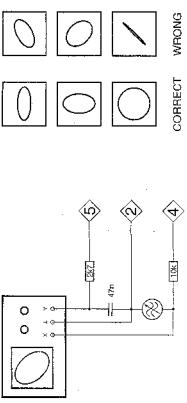
FIG. 1

CD-PART					
<b>TRACKING OFFSET</b>					
Service step 1			3812	Adjust to 0 V DC ± 15mV	
TRACKING BALANCE			3806	CHY = 0.5 V/DIV TB = 2.2 mA Adjust to 0 V DC	

FIG. 2



FIG. 3



## ADJUSTMENT REMARKS

### General

A completely new adjustment of the cd part is absolutely necessary if the optical pick-up unit (OPU) or semiconductors of the servo control circuits have been replaced.

\* **Focus, gain & Tracking Gain** control circuit: Use the measure circuit according to Fig. 1 resp. Fig. 2. Set the oscilloscope to X deflection. The screen will show an ellipse.

\* **Track balance** Necessary to balance the different sensitivities of the track-discodes

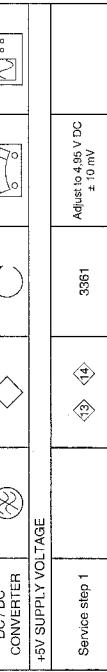
\* **+4V adjustment**

This adjustment is foreseen in a few sets only.  
- Adjustment of charge-circuit

Use a 220 kΩ resistor instead of the accu. Adjust Ucharge to 4.6 V ± 50 mV via R 3258. Exchange the 220 kΩ resistor by a 30 kΩ and measure Ucharge. The voltage must not exceed 5 V ± 50 mV. Otherwise the track-discodes will be damaged. If the voltage is too high, the track-discodes will be destroyed. Call TOSHIBA for the recommended voltage test conditions. If you must not reduce the voltage via R 3258. If done the accu could overheat and explode !

## SERVICE - TOOLS

- Audio signal disc
- Disc without grooves (test disc 5) + disc with live outs, black spots and scratches
- Servo extension set
- Service extension PCB
- \* This service tool has been designed to allow measurements between the PCBs during play and is only useful together with the 3 test discs.

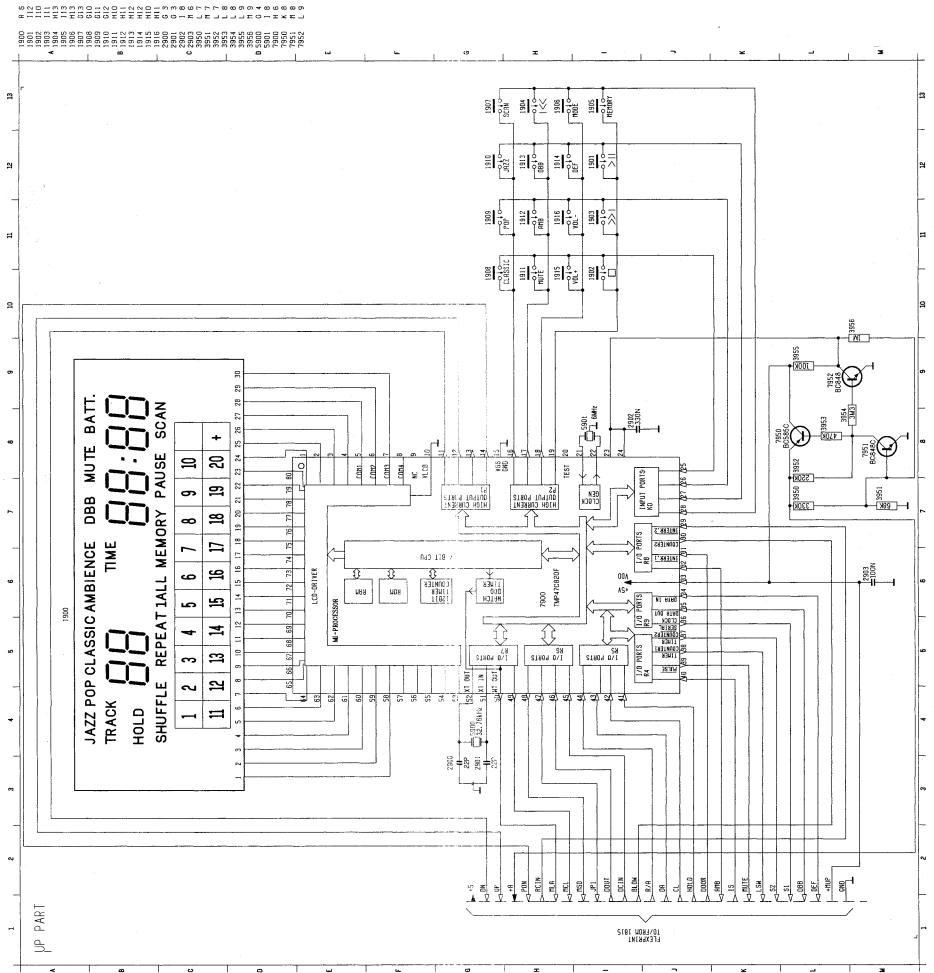


## RC 5 - CODE

### SYSTEM-CODES 20 AND 21 ARE RECOGNIZED (CD AND COMBI)

KEY	COMMAND CODE	KEY	COMMAND CODE
MUTE	13	FAST BACKWARD	50
VOLUME UP	16	PLAY	52
VOLUME DOWN	17	STOP / CLEAR PROGRAM	53
SHUFFLE	20	AMBIENCE	54
REPEAT ALL	29		64
SKIP FORWARD	32	JAZZ	67
SKIP BACKWARD	33	POP	NC
STORE	41	CLASSIC	68
INTRO SCAN	49	DBB	69
PAUSE	48	DEFAT	70
			72





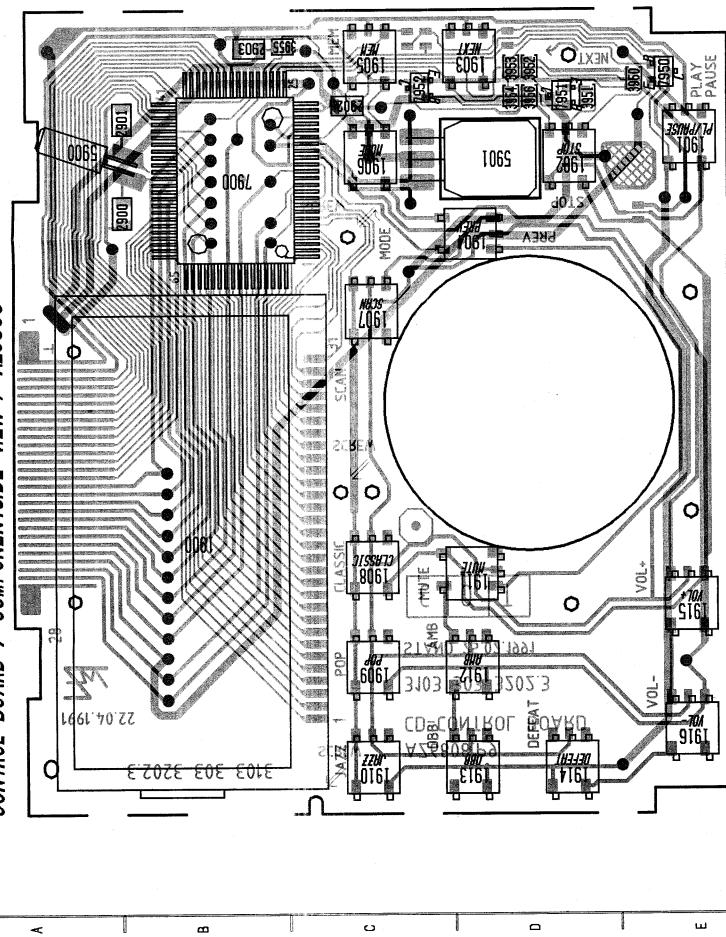
EAD-REF: PC.BZ6808.P9.B3.BZ6808.00

CONTROL BOARD / COMPONENTS

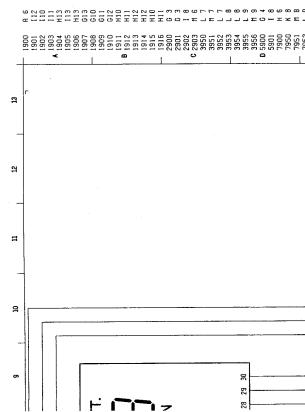
A B C D E

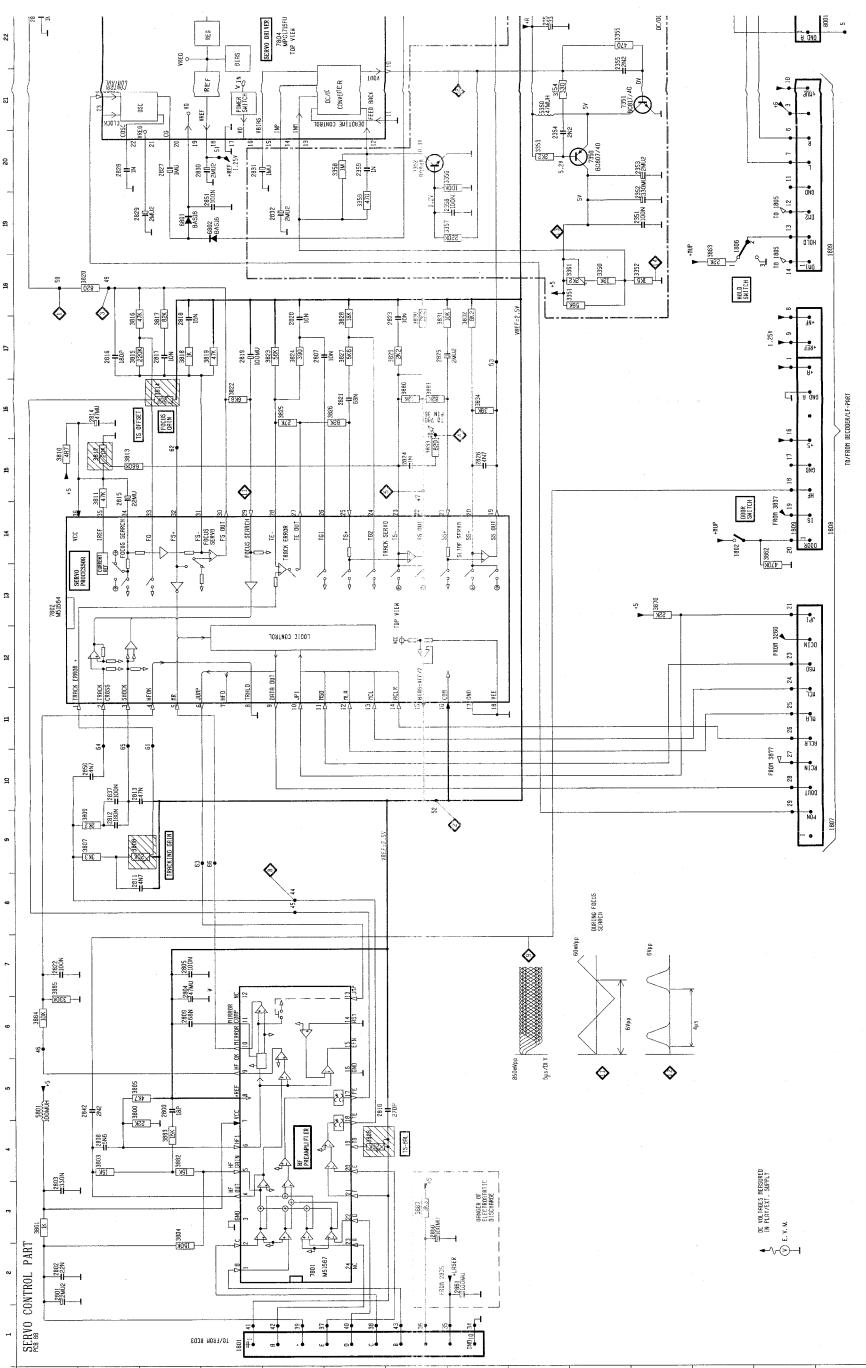
1900	B 3	1904	D 5	1908	C 3	1912	D 2	1916	E 2	1920	B 6	1924	A 5	1928	0 5
1901	E 5	1905	C 6	1909	C 2	1913	D 1	1917	B 5	1921	D 1	1925	D 5	1929	C 5
1902	D 5	1906	C 5	1910	C 1	1914	D 1	1918	B 5	1922	C 5	1926	B 5	1930	E 6
1903	D 6	1907	C 4	1911	D 2	1915	E 2	1919	C 5	1923	D 6	1927	D 5	1931	0 5

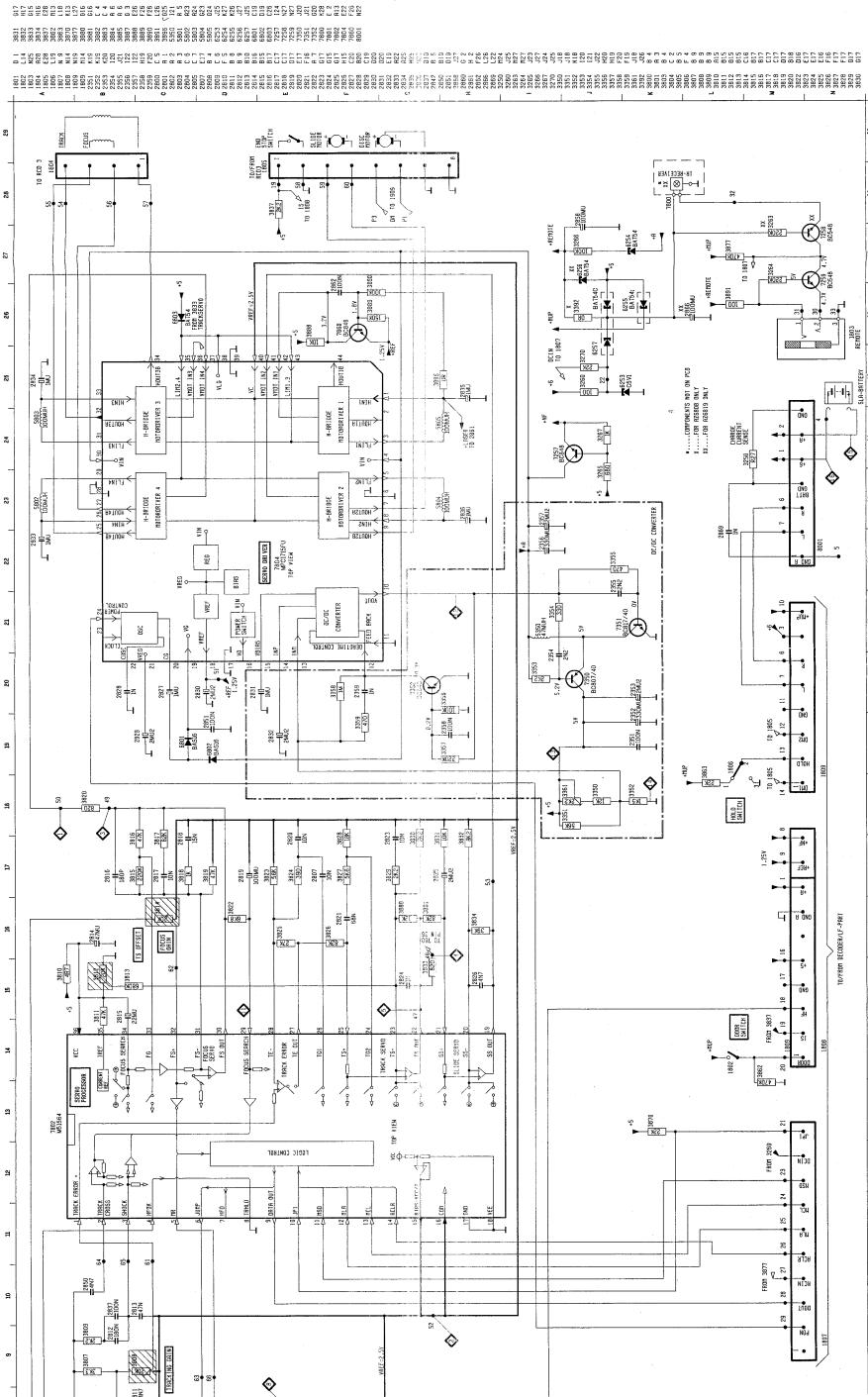
## CONTROL BOARD / COMPONENTSIDE VIEW / AZ6808

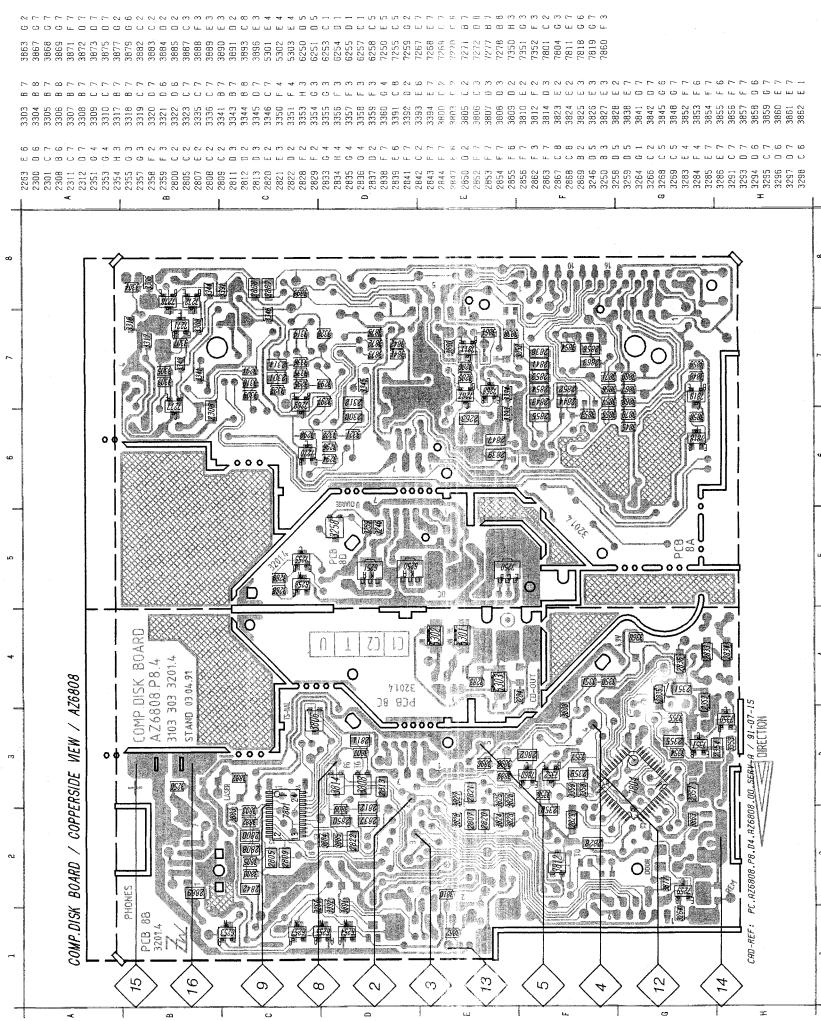
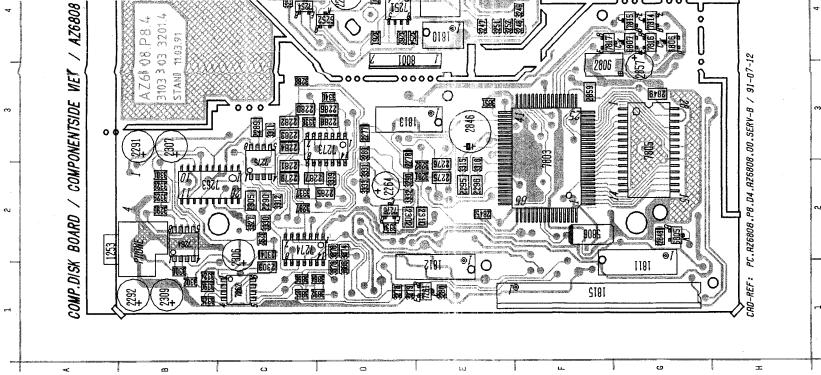


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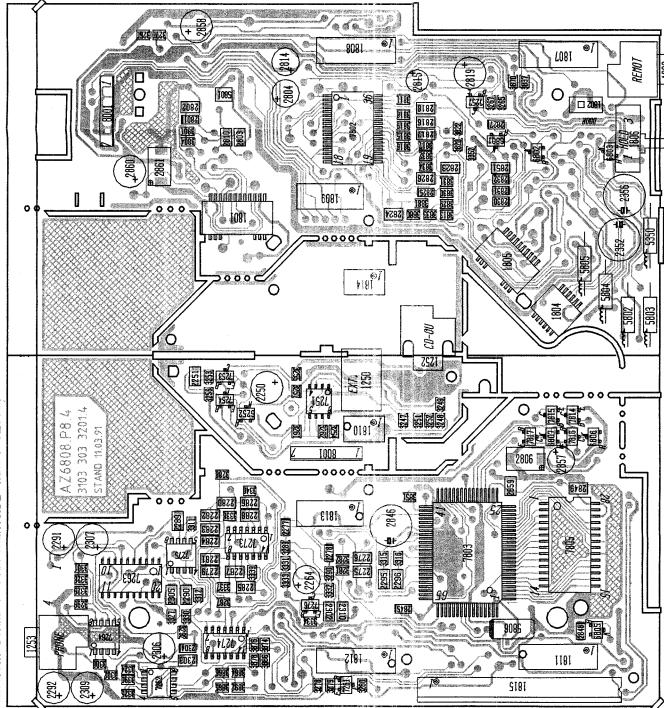




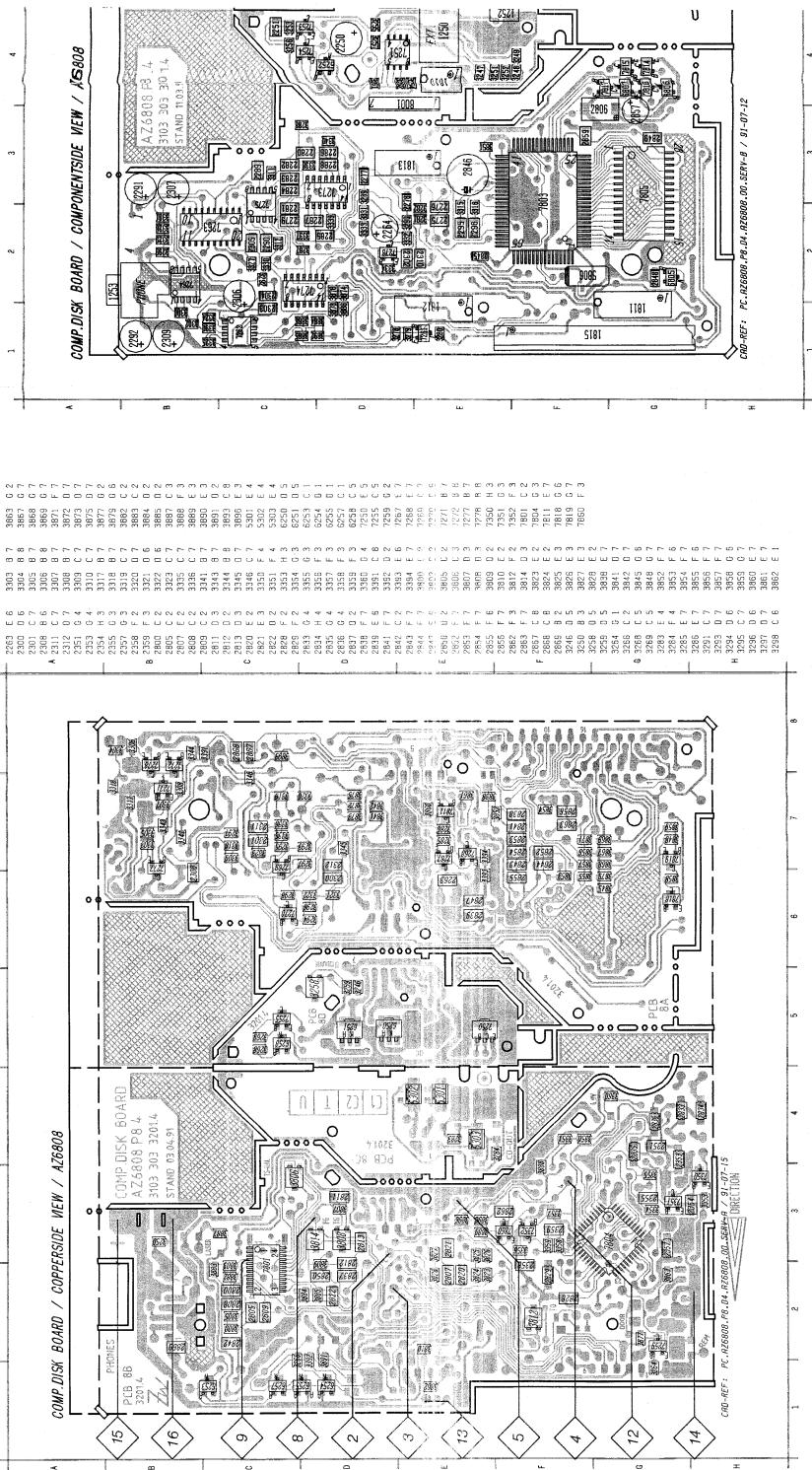


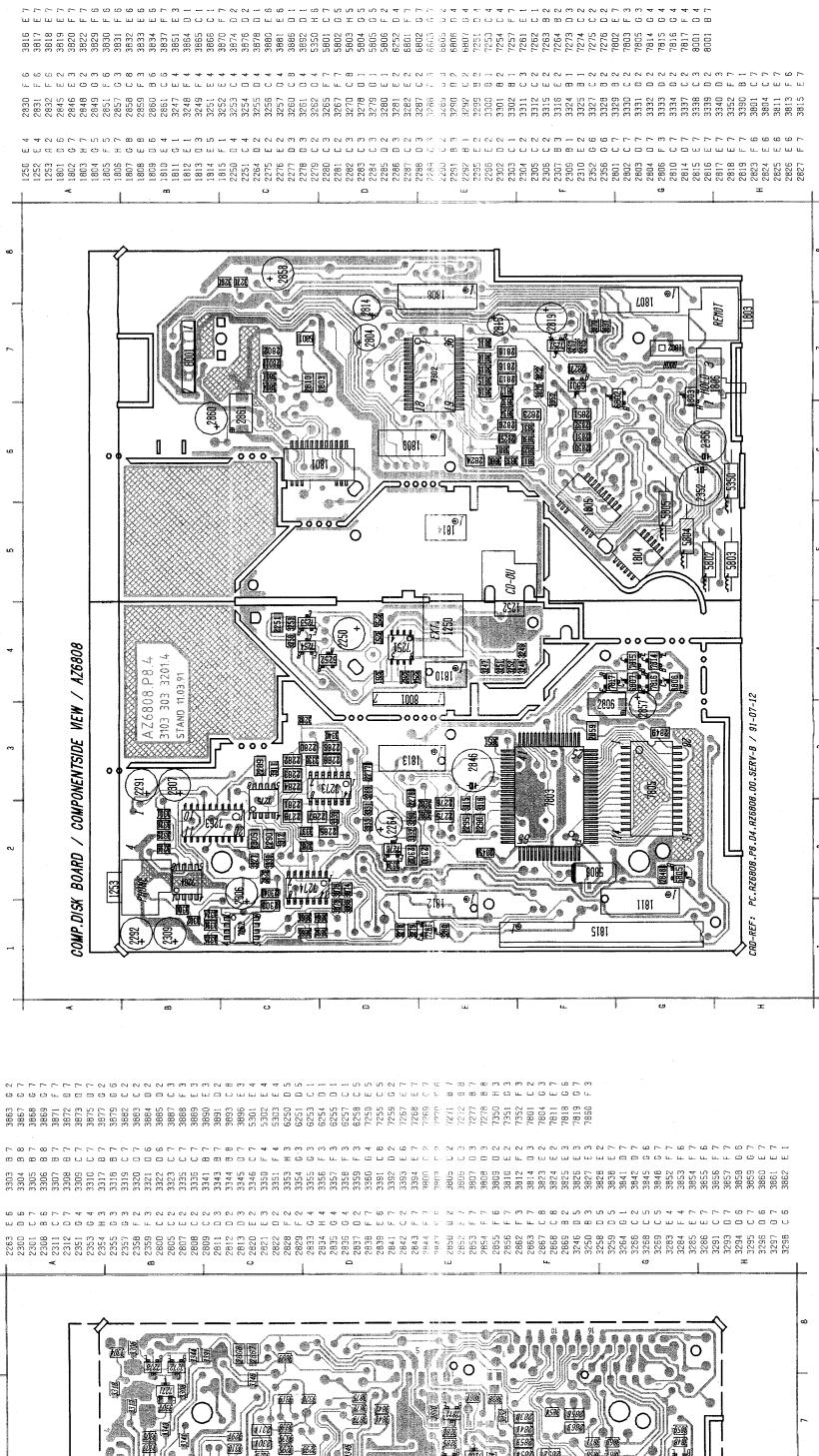


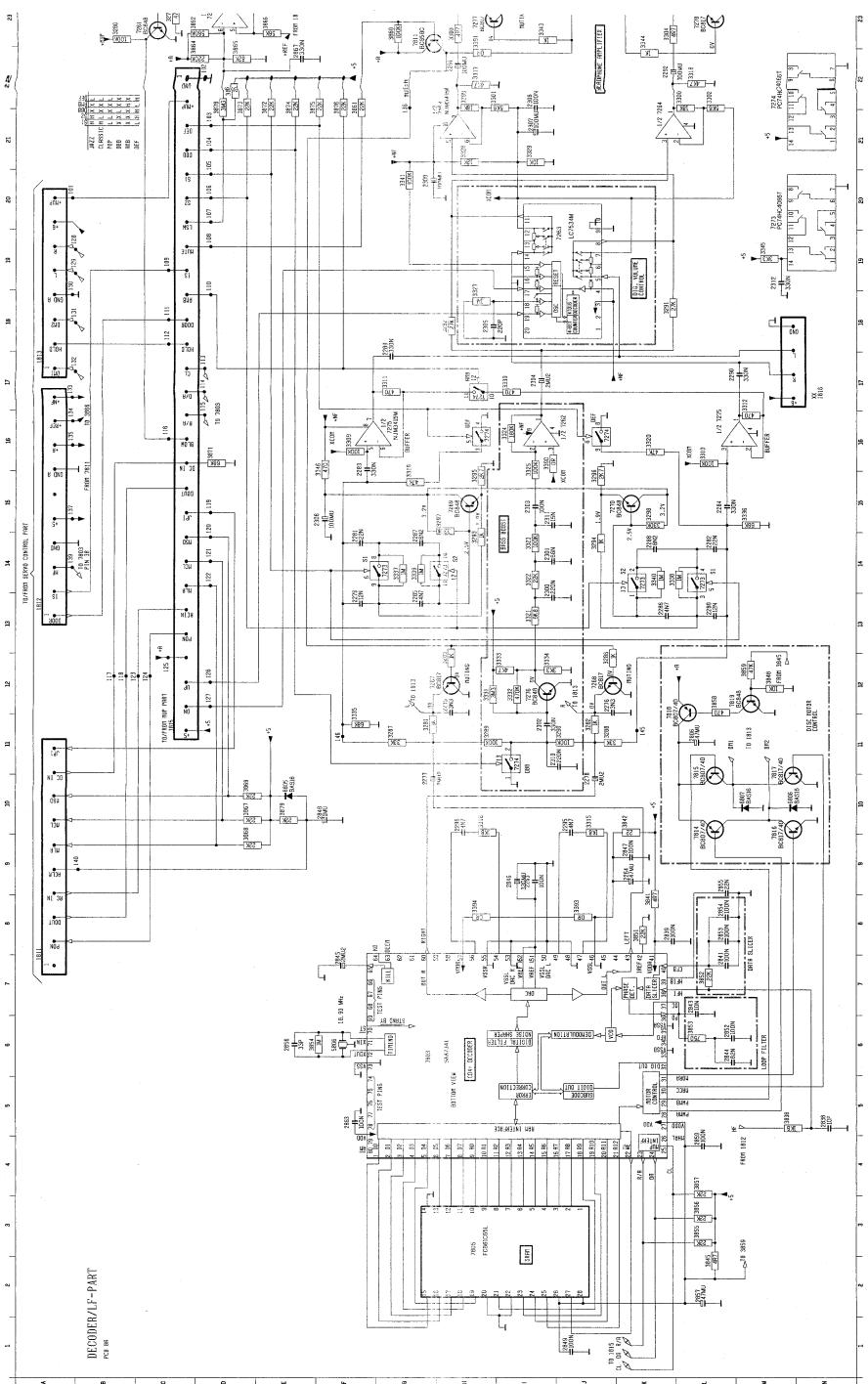
COMP.DSK BOARD / COMPONENTSIDE VIEW / A76808

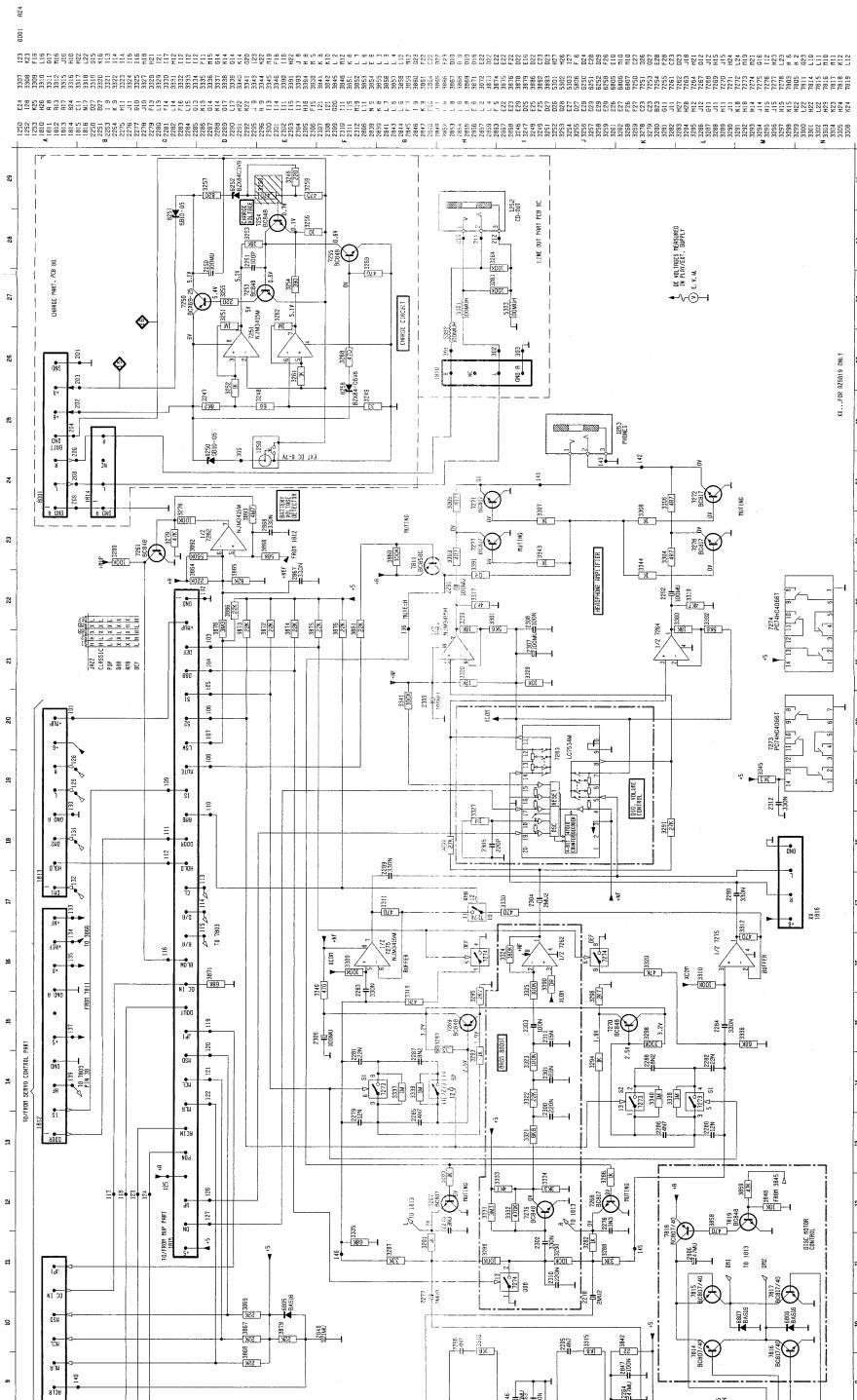


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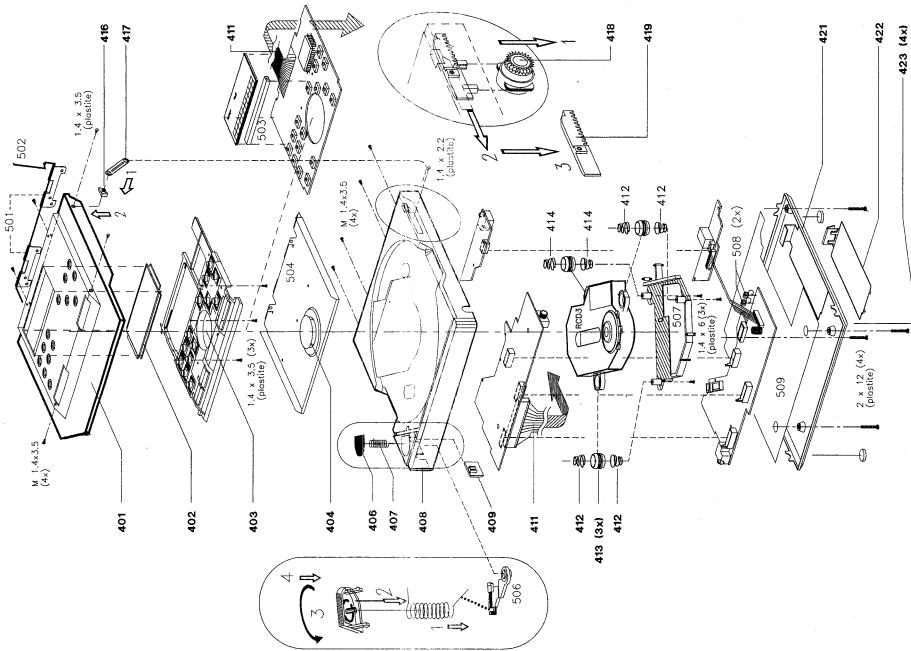






## EXPLODED VIEW

## MECHANICAL PARTS



POUCH  
FOOTDRIVE ASSY

CHLD ASSY

WINDOW

BUTTON SET PRINTED

DISC HOLD DOWN ASSY

KNOB, SLIDE

SPRING

CABINET

FLEXPLINT

SPRING, COMPRESS

DAMPER

SPRING, COMPRESS

BEARING-STAND

LEVER (DOOR)

LEVER (DOOR)

ROTOR

ROTOR

TOP ASSY

BOTTOM ASSY

BATTERY LID ASSY

RUBBER FOOT

LEVER (EJECT)

SPRING, CONTACT

FRAME

SCREW 1.4x2.2

SCREW 1.4x6

SCREW TORX 2x12 PL.

SCREW (M 1.4x1)



CHIP	RESISTORS
3280	4822 051 20104 100k 5k 0.1W 3281 4822 051 10102 1k 2% 0.25W 3282 4822 051 10102 100k 5k 0.1W 3283 4822 051 20104 100k 5k 0.1W 3284 4822 051 20104 100k 5k 0.1W
3285	4822 051 10102 1k 2% 0.25W 3286 4822 051 20133 2k 0.1W 3287 4822 051 20133 33k 5k 0.1W 3288 4822 051 20333 33k 5k 0.1W 3289 4822 051 20104 100k 5k 0.1W
3290	4822 051 20104 100k 5k 0.1W 3291 4822 051 20273 27k 5k 0.1W 3292 4822 051 20273 27k 5k 0.1W 3293 4822 051 10102 1k 2% 0.25W 3294 4822 051 10102 1k 2% 0.25W
3295	4822 051 20272 2k7 5k 0.1W 3296 4822 051 0272 2k7 5k 0.1W 3297 4822 051 20334 330k 5k 0.1W 3298 4822 051 20183 18k 5k 0.1W
3300	4822 051 20183 18k 5k 0.1W 3301 4822 051 20562 5k6 5k 0.1W 3302 4822 051 20562 5k6 5k 0.1W 3303 4822 051 20478 487 5k 0.1W 3304 4822 051 20478 487 5k 0.1W
3305	4822 051 20478 487 5k 0.1W 3306 4822 051 204770 470R 5k 0.1W 3307 4822 051 23104 11. 2% 0.25W 3308 4822 051 10102 1k 2% 0.25W 3309 4822 051 20104 100k 5k 0.1W
3310	4822 051 20104 100k 5k 0.1W 3311 4822 051 20471 470R 5k 0.1W 3312 4822 051 20471 470R 5k 0.1W 3313 4822 051 20182 1k8 5% 0.1W 3314 4822 051 20182 1k8 5% 0.1W
3315	4822 051 20472 4k7 5k 0.1W 3316 4822 051 20472 4k7 5k 0.1W 3317 4822 051 20472 4k7 5k 0.1W 3318 4822 051 20472 4k7 5k 0.1W 3319 4822 051 20473 47k 5% 0.1W 3320 4822 051 20473 47k 5% 0.1W 3321 4822 051 20682 68k 5% 0.1W
3322	4822 051 30223 22k 5% 0.1W 3323 4822 051 20104 100k 5k 0.1W 3324 4822 051 20184 180k 5k 0.1W 3325 4822 051 20104 100k 5k 0.1W 3326 4822 051 20135 1m3 5% 0.1W 3327 4822 051 20135 1m3 5% 0.1W
3328	4822 051 20472 4k7 5% 0.1W 3329 4822 051 20332 3k3 5% 0.1W 3330 4822 051 20683 68k 5% 0.1W 3331 4822 051 20335 383 5k 0.1W 3332 4822 051 20474 470k 5% 0.1W
3333	4822 051 20472 4k7 5% 0.1W 3334 4822 051 20103 10k 5k 0.1W 3335 4822 051 20471 470R 5% 0.1W 3336 4822 051 20683 68k 5% 0.1W 3337 4822 051 20135 1m3 5% 0.1W
3338	4822 051 20135 1m3 5% 0.1W 3339 4822 051 20135 1m3 5% 0.1W 3340 4822 051 20135 1m3 5% 0.1W 3341 4822 051 20104 100k 5k 0.1W 3343 4822 051 10102 1k 2% 0.25W
3340	3344 4822 051 20332 3k3 5% 0.1W 3345 4822 051 20471 470R 5% 0.1W 3346 4822 051 20471 470R 5% 0.1W 3347 4822 051 20222 2k2 5% 0.1W 3348 4822 051 20222 2k2 5% 0.1W 3349 4822 051 20103 10k 5k 0.1W 3350 4822 051 20223 22k 5% 0.1W
3351	4822 051 20823 12k 5% 0.1W 3352 4822 051 20823 1k5 2% 0.1W 3353 4822 051 20231 330R 5% 0.1W 3354 4822 051 20471 470R 5% 0.1W 3355 4822 051 20104 100k 5k 0.1W
3356	4822 051 20104 100k 5k 0.1W 3357 4822 051 20234 220k 5% 0.1W 3358 4822 051 20155 1m3 5% 0.1W 3359 4822 051 20471 470R 5% 0.1W 3360 4822 051 20098 CHIP JUMPER 3361 4822 051 20098 CHIP JUMPER 3362 4822 051 20098 CHIP JUMPER 3363 4822 051 20098 CHIP JUMPER 3364 4822 051 20098 CHIP JUMPER 3365 4822 051 20098 CHIP JUMPER 3366 4822 051 20098 CHIP JUMPER 3367 4822 051 20098 CHIP JUMPER 3368 4822 051 20098 CHIP JUMPER 3369 4822 051 20098 CHIP JUMPER 3370 4822 051 20098 CHIP JUMPER 3371 4822 051 20098 CHIP JUMPER 3372 4822 051 20098 CHIP JUMPER 3373 4822 051 20098 CHIP JUMPER 3374 4822 051 20098 CHIP JUMPER 3375 4822 051 20098 CHIP JUMPER 3376 4822 051 20098 CHIP JUMPER 3377 4822 051 20098 CHIP JUMPER 3378 4822 051 20098 CHIP JUMPER 3379 4822 051 20098 CHIP JUMPER 3380 4822 051 20098 CHIP JUMPER 3381 4822 051 20098 CHIP JUMPER 3382 4822 051 20098 CHIP JUMPER 3383 4822 051 20098 CHIP JUMPER 3384 4822 051 20098 CHIP JUMPER 3385 4822 051 20098 CHIP JUMPER 3386 4822 051 20098 CHIP JUMPER 3387 4822 051 20098 CHIP JUMPER 3388 4822 051 20098 CHIP JUMPER 3389 4822 051 20098 CHIP JUMPER 3390 4822 051 20098 CHIP JUMPER 3391 4822 051 20098 CHIP JUMPER 3392 4822 051 20098 CHIP JUMPER 3393 4822 051 20098 CHIP JUMPER 3394 4822 051 20098 CHIP JUMPER 3395 4822 051 20098 CHIP JUMPER 3396 4822 051 20098 CHIP JUMPER 3397 4822 051 20098 CHIP JUMPER 3398 4822 051 20098 CHIP JUMPER 3399 4822 051 20098 CHIP JUMPER 3400 4822 051 20098 CHIP JUMPER 3401 4822 051 10102 1k 2% 0.25W 3402 4822 051 20153 15k 5% 0.1W 3403 4822 051 20154 150k 5% 0.1W 3404 4822 051 20472 4k7 5% 0.1W 3405 4822 051 20472 4k7 5% 0.1W 3406 4822 100 11733 20k TRIM POT SMD 3407 4822 051 20332 2m2 5% 0.1W 3408 4822 051 20473 4k7 5% 0.1W 3409 4822 051 20473 4k7 5% 0.1W 3410 4822 051 20473 4k7 5% 0.1W 3411 4822 051 20473 4k7 5% 0.1W 3412 4822 100 11733 20k TRIM POT SMD 3413 4822 051 20664 680k 5% 0.1W 3414 4822 100 11733 20k TRIM POT SMD 3415 4822 051 20224 220k 5% 0.1W 3416 4822 051 20473 47k 5% 0.1W 3417 4822 051 20473 47k 5% 0.1W 3418 4822 051 20473 47k 5% 0.1W 3419 4822 051 20393 39k 5% 0.1W 3420 4822 051 20823 820k 5% 0.1W 3421 4822 051 20823 820k 5% 0.1W 3422 4822 051 20682 6k8 5% 0.1W 3423 4822 051 20682 6k8 5% 0.1W 3424 4822 051 20553 56k 5% 0.1W 3425 4822 051 20394 390R 5% 0.1W 3426 4822 051 20273 27k 5% 0.1W 3427 4822 051 20193 10k 5% 0.1W 3428 4822 051 20823 82k 5% 0.1W 3429 4822 051 20562 5k8 5% 0.1W 3430 4822 051 20562 5k8 5% 0.1W 3431 4822 051 20821 820R 5% 0.1W 3432 4822 051 20821 820R 5% 0.1W 3433 4822 051 20333 39k 5% 0.1W 3434 4822 051 20222 2k2 5% 0.1W 3435 4822 051 20152 1k8 5% 0.1W 3436 4822 051 20478 4R7 5% 0.1W 3437 4822 051 20822 8k2 5% 0.1W 3438 4822 051 20229 22R 5% 0.1W 3439 4822 051 20474 4R7 5% 0.1W 3440 4822 051 20474 4R7 5% 0.1W 3441 4822 051 20153 10k 5% 0.1W 3442 4822 051 20223 22k 5% 0.1W 3443 4822 051 20223 22k 5% 0.1W

CHIP RESISTORS										
3853	4822	051	20751	750R	5%	0.1W	3874	4822	051	20223
3854	4822	051	20135	180R	5%	0.1W	3875	4822	051	20223
3855	4822	051	20223	22k	5%	0.1W	3876	4822	051	20223
3855	4822	051	20223	22k	5%	0.1W	3877	4822	051	20474
3857	4822	051	20223	22k	5%	0.1W	3878	4822	051	20353
3858	4822	051	20471	470R	5%	0.1W	3879	4822	051	20223
3859	4822	051	20473	47k	5%	0.1W	3880	4822	051	20123
3860	4822	051	20104	100k	5%	0.1W	3881	4822	051	20823
3862	4822	051	20423	23k	5%	0.1W	3882	4822	051	20153
3862	4822	051	20474	470k	5%	0.1W	3883	4822	051	20153
3863	4822	051	20223	22k	5%	0.1W	3884	4822	051	20103
3864	4822	051	20323	220k	2%	0.1W	3885	4822	051	20334
3865	4822	051	20322	120k	2%	0.1W	3886	4822	051	20223
3866	4822	051	20563	56k	5%	0.1W	3887	4822	051	20312
3867	4822	051	20223	22k	5%	0.1W	3888	4822	051	20103
3868	4822	051	20323	22k	5%	0.1W	3889	4822	051	20154
3869	4822	051	20223	22k	5%	0.1W	3890	4822	051	20104
3870	4822	051	20223	22k	5%	0.1W	3891	4822	051	20101
3871	4822	051	20683	68k	5%	0.1W	3892	4822	051	20554
3872	4822	051	20223	22k	5%	0.1W	3893	4822	051	20475
3873	4822	051	20223	22k	5%	0.1W	3894	4822	051	20058
CHIP CAPACITORS										
2250	4822	124	42241	100nF	20%	6.3V	2356	4822	124	42242
2264	4822	124	4256	3.4nF	6.3V		2359	4822	124	31746
2275	5222	122	34346	3.2nF	10%	6.3V	2803	4822	122	33064
2276	5222	122	21445	3.2nF	10%	6.3V	2804	4822	124	42756
2275	5222	122	30564	520nF	20%	6.3V	2805	4822	124	42757
2284	4822	122	31064	330nF	20%	6.3V	2814	4822	124	42246
2282	4822	122	31064	3.20nF	20%	6.3V	2815	4822	124	42246
2291	4822	122	31664	330nF	20%	6.3V	2819	4822	124	42241
2292	4822	124	42241	100nF	20%	6.3V	2820	4822	124	31746
2302	4822	122	31064	330nF	20%	6.3V	2857	4822	122	34444
2305	4822	124	42241	100nF	20%	6.3V	2858	4822	124	42246
2307	4822	124	42241	100nF	20%	6.3V	2859	4822	124	42241
2312	4822	122	31664	330nF	20%	6.3V	2860	4822	124	42241
2352	4822	124	42242	330nF	20%	6.3V	2868	4822	122	33064
CHIP CAPACITORS										
2251	4822	122	31765	100nF	5%	50V	2305	4822	122	31965
2263	4822	122	31956	100nF	10%	6.3V	2308	4822	122	33446
2278	4822	124	1065	2.41nF	20%	6.3V	2310	4822	122	31787
2279	5222	122	31065	14nF	10%	6.3V	2311	4822	122	31782
2280	5222	122	31648	12nF	10%	6.3V	2311	4822	122	33446
2281	4822	122	31197	22nF	10%	6.3V	2334	4822	122	31644
2282	4822	122	31197	22nF	10%	6.3V	2335	4822	122	31644
2283	4822	122	311784	4.7nF	10%	6.3V	2337	4822	124	10955
2286	4822	122	311784	4.7nF	10%	6.3V	2338	4822	122	33446
2287	4822	122	32856	8.2mF	10%	6.3V	2800	4822	122	31769
2288	4822	122	32856	8.2mF	10%	6.3V	2801	4822	124	10965
2295	4822	122	311784	4.7mF	10%	6.3V	2802	4822	122	31797
2296	4822	122	311784	4.7mF	10%	6.3V	2805	4822	122	33456
2300	4822	122	32327	220nF	10%	6.3V	2807	4822	122	33442
2301	4822	122	32991	68kF	10%	6.3V	2808	4822	122	31956
2303	4822	122	33396	100nF	10%	6.3V	2809	4822	122	33891
2304	4822	124	10965	2.41nF	20%	6.3V	2810	4822	122	32142

CHIP CAPACITORS	2811	4822	122	31784	4.7nF	10%	50V	2837	4822	122	31496	100nF	10%	63V
	2812	4822	126	11499	1.8nF	20%	50V	2838	4822	122	31971	10nF	10%	50V
	2813	4822	122	32442	1.4nF	10%	53V	2839	4822	122	31496	100nF	10%	63V
	2814	4822	122	31768	1.8nF	5%	50V	2841	4822	122	31496	10nF	10%	63V
	2817	4822	122	32442	1.0nF	10%	50V	2842	4822	122	31644	2.2nF	10%	63V
	2818	4822	122	32597	6.8nF	10%	63V	2843	4822	122	31442	1.0nF	10%	50V
	2820	4822	122	32442	1.0nF	10%	50V	2844	5322	122	32838	8.0nF	10%	63V
	2821	4822	122	32591	6.8nF	10%	63V	2845	4822	124	19655	2.2nF	20%	63V
	2822	4822	122	32442	1.0nF	10%	63V	2847	4822	122	31496	1.0nF	10%	63V
	2823	4822	122	32442	1.0nF	10%	50V	2848	5322	122	19798	1.0nF	20%	63V
	2824	5322	122	31647	1.0nF	10%	63V	2849	4822	122	31496	100nF	10%	63V
	2825	4822	124	10965	2.2nF	20%	6.3V	2850	4822	122	31781	4.7nF	10%	50V
	2826	4822	122	31784	4.7nF	10%	50V	2851	4822	122	31496	100nF	10%	63V
	2827	5322	124	10798	1.0nF	20%	6.3V	2852	4822	122	31496	100nF	10%	63V
	2829	4822	124	10965	2.2nF	20%	6.3V	2853	4822	122	31496	100nF	10%	63V
	2830	4822	124	10965	2.2nF	20%	6.3V	2854	4822	122	31496	100nF	10%	63V
	2831	4822	124	10798	1.0nF	20%	6.3V	2855	4822	122	31797	2.2nF	10%	63V
	2832	4822	124	10965	2.2nF	20%	6.3V	2856	4822	122	31495	100nF	10%	63V
	2833	5322	124	10798	1.0nF	20%	6.3V	2857	4822	122	48187	100nF	20%	63V
	2835	5322	124	10798	1.0nF	20%	6.3V	2858	4822	122	31496	100nF	10%	63V
	2836	5322	124	10798	1.0nF	20%	6.3V	2859	5322	122	31647	1nF	10%	63V